

## REMARKS

### Disposition of the Claims

The Examiner has rejected Claims 122-146 under 35 U.S.C. §112, first paragraph, as based on a disclosure which is not enabling.

The Examiner has rejected Claims 122-146 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Examiner has rejected Claims 122-146 under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps.

### Summary of the Invention

Before considering the art rejections, it is believed that a brief review of the present invention will be helpful.

Applicants have discovered a new process for withdrawing and dewatering slag from a gasification system. Specifically, the lockhopper of the present invention is an inclined cylindrical pressure vessel with a rotating auger or equivalent conveying device inside. The inlet to the lockhopper is configured to receive slag from a gasifier and the outlet is configured to discharge the processed slag directly into container suitable for carrying the slag away. The conveying lockhopper is inclined, with the outlet preferably at a higher elevation than the inlet. The auger is constantly rotating to break down the slag, separate it from the water, and convey it towards the outlet. In dump mode, the inlet valve is closed and the auger is stopped. The water level within the conveying lockhopper is reduced by pushing the water into an atmospheric heel tank using

a pressurized cap of nitrogen. After the water has been pushed into the heel tank, the heel tank valve is closed and a vent valve is opened to depressurize the conveying lockhopper. After depressurization, the outlet valve is opened for a short time, typically 1-2 minutes and the auger is restarted to discharge the slag. The dewatered slag is then discharged through the outlet valve and deposited into awaiting containers suitable for transporting the slag.

35 U.S.C. §112, First Paragraph, Rejection of Claims 122-146

Reconsideration and withdrawal of the 35 U.S.C. §112, first paragraph, rejection of Claims 122-146 as being based upon a disclosure which is not enabling are respectfully requested.

The Examiner states that "[a] step of '**dewatering**' [sic] is critical or essential to the practice of the invention, but not included in the claim(s) is not enable by the disclosure." (See Examiner's Detailed Action at p. 2) Respectfully, Applicants disagree with the Examiner's assertion. Specifically, Applicants' Specification of the presently claimed invention discloses that "[d]uring collection mode, which typically lasts 10-30 minutes, the auger is constantly rotating to break down the slag, separate it from the water, and convey it towards the outlet." (See Applicants' Specification as filed at p. 6, lines 15-24). The Federal Circuit in *In re Wright*, 999 F.2d 1557 (1993) held that "the specification must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation'." The Applicants' Specification teaches that the auger separates the water from the slag (i.e., dewatering the slag). Accordingly, the disclosure is enabling under 35 U.S.C. §112, first paragraph.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejection of Claims 122-146 under 35 U.S.C. §112, first paragraph.

35 U.S.C. §112, Second Paragraph, Rejection of Claims 122-146

Reconsideration and withdrawal of the 35 U.S.C. §112, second paragraph, rejection of Claims 122-146 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention and as being incomplete for omitting essential steps are requested.

The Examiner rejected Claims 122-146 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. The Examiner further states that "[i]n claims 122-146, it is unclear how, or at what point the slag becomes '**dewatered**.' The Examiner also rejected Claims 122-146 under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. The Examiner further states that "[t]he omitted steps are: a '**dewatering**' step." (See Examiner's Detailed Action at p. 2)

Applicants have amended Claim 122 to recite the manner in which the slag is dewatered during the conveying step. Specifically, the limitations of dependent Claim 126 have been incorporated into independent Claim 122, thereby further defining the conveying step as well as defining that the auger breaks down the slag and separates the slag from the water. Support for this amendment is found in the specification on page 6, lines 15-24 and in originally presented Claim 126. The amendment is offered solely for the purposes of clarification and should not be construed as narrowing of the claimed methods.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejection of Claims 122-146 under 35 U.S.C. §112, second paragraph.

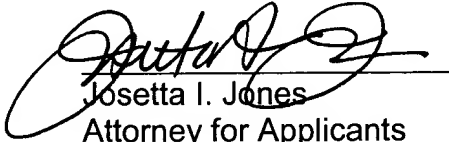
Conclusion

It is respectfully submitted that the 35 U.S.C. §112, first paragraph, rejection of the disclosure lacking enablement is unfounded. The Applicants' specification teaches to one of ordinary skill in the art a manner in which to remove water from slag that is received from a gasification system.

Furthermore, it is respectfully submitted that the 35 U.S.C. §112, second paragraph, rejection of the claims as being indefinite and incomplete is now unfounded in light of the present amendment.

For the reasons stated, Applicants submit that this application is now in condition for allowance and notice to that effect is earnestly solicited.

Respectfully submitted,

  
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August 20, 2003